

VBA: Link From ArcMap to Google Maps

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Ever wanted to link from an open ArcMap project directly to a Google Maps or Google Maps Street View (available in the Wasatch Front urban areas) in a browser?

The code below can be paired with an ArcMap custom tool to open your default browser to a Google map at the location at which your ArcMap dataframe was clicked. The default link is to open a north-facing Street View window in the google map if available.

Here's how

Part I. Paste code into VBA Editor

- 1) From the ArcMap menu, navigate to Tools --> Macros --> Visual Basic Editor to open the VBA editor
- 2) In the VBA Editor's Project Window, expand the Project --> Arcmap Objects folder and double click on ThisDocument
- 3) Paste the code (below) in the window that opens and close the VBA editor.
- 4) Save your project

Part II. Create and configure custom ArcMap Tool

- 1) From the ArcMap menu, navigate to Tools -->Customize
- 2) Click the Commands tab.
- 3) Click the drop-down arrow on the Save in combo box, then change the selected item so it is the current name of your ArcMap project (ex. Untitled.mxd)
- 4) Click [UIControls] in the Categories list. then Click the New UIControl button.
- 5) Click the UIToolControl radio button and then click Create.
- 6) The name of the new tool appears in the Commands list. Single click the newly created UIControl, then click it again to activate in-place editing, then type a new name for the control so it reads Project.GoogleMap_Link.
- 7) Click and drag the newly created UIControl and drop it on an ArcMap toolbar or menu.
- 8) On the toolbar or menu, right-click the command to set its image, caption, and other properties.
- 9) Save Project and start using the tool.

Note: Your ArcMap dataframe cannot have an undefined spatial reference system.
Option Explicit

```
Const SW_SHOWMAXIMIZED = 3
Const SW_SHOWMINIMIZED = 2
Const SW_SHOWDEFAULT = 10
Const SW_SHOWMINNOACTIVE = 7
Const SW_SHOWNORMAL = 1
```

```
Private Declare Function ShellExecute Lib "shell32.dll" _
Alias "ShellExecuteA" (ByVal hWnd As Long, _
ByVal lpOperation As String, ByVal lpFile As String, _
ByVal lpParameters As String, ByVal lpDirectory As String, _
```

ByVal nShowCmd As Long) As Long

Private Function OpenLocation(URL As String, WinState As Long) As Long

'PURPOSE: Opens default browser to display URL

'RETURNS: module handle to executed application or
'Error Code (< 32) if there is an error

'can also be used to open any document associated with
'an application on the system (e.g., passing the name
'of a file with a .doc extension will open that file in Word)

Dim IHWnd As Long
Dim IAns As Long

IAns = ShellExecute(IHWnd, "open", URL, vbNullString, _
vbNullString, WinState)

OpenLocation = IAns

'ALTERNATIVE: if not interested in module handle or error
'code change return value to boolean; then the above line
'becomes:

'OpenLocation = (IAns > 32)

End Function

Private Sub GoogleMap_Link_MouseDown(ByVal button As Long, ByVal shift _
As Long, ByVal x As Long, ByVal y As Long)

Dim pMxDoc As IMxDocument
Dim pApp As IMxApplication
Dim pMap As IMap
Dim pPoint As IPoint
Dim pSpatialReferenceFactory As ISpatialReferenceFactory
Dim pSpatialReference As ISpatialReference

Set pMxDoc = ThisDocument
Set pMap = pMxDoc.FocusMap
Set pApp = Application

Set pSpatialReferenceFactory = New SpatialReferenceEnvironment
Set pSpatialReference = pSpatialReferenceFactory. _
CreateGeographicCoordinateSystem(esriSRGeoCS_WGS1984)

' convert mouse click to map units
Set pPoint = pApp.Display.DisplayTransformation.ToMapPoint(x, y)
Set pPoint.SpatialReference = pMap.SpatialReference
If pPoint.SpatialReference.Name <> pSpatialReference.Name Then
pPoint.Project pSpatialReference

End If

Dim URLstr As String
Dim returnLong As Long

'more info on google map URL query string request setting parameters:
'http://mapki.com/index.php?title=Google_Map_Parameters

'STREET VIEW USE THIS FUNCTION

URLstr = "http://www.google.com/maps?ie=UTF8&layer=c&cbll=" & _
pPoint.y & "," & pPoint.x & "&cbp=1,0,,0,5&ll=" & pPoint.y _

& "," & pPoint.x & "&z=16"

'REGULAR MAP USE THIS FUNCTION ... NO STREETVIEW WINDOW

'URLstr = "http://www.google.com/maps?ie=UTF8&ll=" & pPoint.y _
& "," & pPoint.x & "&spn=0.015045,0.016844&z=16"

'Use one of the constants as the window state parameter

returnLong = OpenLocation(URLstr, SW_SHOWNORMAL)

End Sub